Air Conditioning Technology
CERTIFICATE OF ACHIEVEMENT (CA)   **REQUIRED CREDITS: 47**   **DEGREE CODE: AC-CT**

IMPORTANT
Important information about the educational debt, earnings, and completion rates of students who attended this program are located at www.csn.edu/gainful-employment.

DESCRIPTION
The Air Conditioning Technology Program is an 18-month course of study that prepares students to install, maintain, service, troubleshoot, and repair residential heating and cooling systems. Additionally, this program includes commercial refrigeration, allowing the student to learn how to maintain, troubleshoot, and repair walk-in freezers, ice machines, ice cream machines, and other related machinery. Instruction includes classroom, laboratory, and actual in-the-field hands-on course work.

STUDENT LEARNING OUTCOMES
- Incorporate workforce safety principals while performing basic tasks of a Heating, Ventilation, Air Conditioning and Refrigeration (HVAC/R) technician.
- Interpret electrical/mechanical schematics on HVAC/R equipment to diagnose mechanical or electrical problems in a residential or light commercial environment.
- Appraise EPA rules, regulations and refrigerant handling techniques in the performance of HVAC/R duties.
- Diagnose and repair electrical or mechanical problems on residential air conditioning equipment; light commercial air conditioning equipment; critical systems; boilers; chillers; equipment cooling systems.

PLEASE NOTE - The courses listed below may require a prerequisite or corequisite. Read course descriptions before registering for classes. All MATH and ENG courses numbered 01-99 must be completed before reaching 30 total college-level credits. No course under 100-level counts toward degree completion.

GENERAL EDUCATION REQUIREMENTS (6-8 CREDITS)

MATHEMATICS (3 credits)
MATH 104B or 116

COMMUNICATIONS (3-5 credits)
BUS 108; COM 101, 102, 115, 215; ENG 100, 101, 102, 107, 113, 114, 205; JOUR102; THTR 105

SPECIAL PROGRAM REQUIREMENTS (41 CREDITS)

CORE REQUIREMENTS (30 credits)

Code	Course	Credits
AC 102B	Introduction to HVAC Electrical Theory and Application	5
AC 103B	Introduction to HVAC Mechanical Theory and Application	5
AC 106B	Residential Gas Heating	5
AC 110B	Intermediate HVAC Electrical Theory and Application	5
AC 111B	Heat Pumps	5
AC 115B	Troubleshooting	5

Choose 5 credits from the following

Code	Course	Credits
AC 200B	Commercial Refrigeration I	5
AC 210B	Boiler Operation and Maintenance	5
AC 220B	Chiller Operations and Maintenance	5

Plus 6 credits from the following

Code	Course	Credits
AC 114B	Heat Load and Duct Design	5
AC 116B	Copper Fundamentals	1
AC 119B	Professionals in Customer Service	1.5
AC 120B	Air Conditioning Duct Work Fabrication	3
AC 200B	Commercial Refrigeration I	5
AC 201B	HVAC Automatic Controls	3
AC 202B	Commercial Refrigeration II	5
AC 210B	Boiler Operation & Maintenance	5
AC 212B	Equipment Cooling	5
AC 220B	Chiller Operations and Maintenance	5
AC 221B	Gas Heat Pump Technology I	5
CADD 100	Introduction to Computer Aided Drafting	3
CONS 120B	Construction Plans and Specifications	3

Digital Literacy Elective (0-3 credits)

Code	Course	Credits
IS 100B	Core Computing Competency	0
IS 101	Introduction to Information Systems	3

Computation included in AC 103B

Human Relations included AC 102B

See Degree Plan on next page.

NOTE
- Course numbers with the "B" suffix may be non-transferable for a NSHE baccalaureate degree.
  - Course numbers with the "H" suffix are designated Honors-level courses and can be used to fulfill equivalent general education requirements. For more information visit www.csn.edu/honors.
  - In no case, may one course be used to meet more than one requirement except for the Values and Diversity general education requirement (only AA, AS, and AB degrees) which may be used to fulfill the corresponding general education or emphasis requirement.
  - Students may elect to graduate using the degree requirements in effect at the time of matriculation, or when they declared or changed major or the current catalog. If a program is official after a student has matriculated, the student may choose the degree requirements of the new program. In no case may a student use a catalog which is more than six years old at the time of graduation.

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FULL-TIME STUDENT DEGREE PLAN

Add more semesters to modify this plan to fit part-time student needs.

FIRST SEMESTER	Credits
Complete Mathematics (see courses previous page)	3
AC 102B Intro to HVAC Electrical Theory and Application	5
AC 103B Intro to HVAC Mechanical Theory and Application	5
TOTAL CREDITS...*13*	

SECOND SEMESTER	Credits
Complete Communications (see courses previous page)	3-5
AC 106B Residential Gas Heating	5
AC 110B Intermediate HVAC Electrical Theory and Application	5
TOTAL CREDITS...*13-15*	

THIRD SEMESTER	Credits
AC 111B Heat Pumps	5
AC 200B or 210B or 220B	5
TOTAL CREDITS...*10*	

FOURTH SEMESTER	Credits
AC 115B Troubleshooting	5
Complete Electives (see courses previous page)	6
TOTAL CREDITS...*11*	

DEGREE PLAN TOTAL CREDITS...**47-49**